



How to Calibrate Your Sprinkler System¹

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Knowing the amount of water your sprinkler system applies to your lawn is an important step in efficient water use. Most people irrigate their turf for a given number of minutes without knowing how much water they are really applying. This leads to over- or under-watering, neither of which will benefit the turf. In addition, water is becoming an increasingly scarce natural resource, and should be utilized as efficiently as possible. Calibrating will help you to apply the correct amount of water to your yard. Whether you have an in-ground system or a hose and a sprinkler, the following steps will calibrate your system:

1. Obtain several (5 to 10) coffee cans, tuna fish cans, or other straight-sided containers to catch the irrigation water. Containers that are 3 to 6 inches in diameter work best.
2. If you have an in-ground system, place the containers in one zone at a time. Scatter the cans at random within the zone (Figure 1). Repeat the entire procedure in every zone because there may be differences in the irrigation rates. If you use a hose-end sprinkler to water your turf, place the containers in a straight line from the sprinkler to the edge of the watering pattern. Space the containers evenly.



Figure 1. Calibrating a Sprinkler System

3. Turn the water on for 15 minutes.
4. Use a ruler to measure the depth of water in each container. *Note:* The more precise the measurement, the better your calibration will be. For most cases, measurements to the nearest 1/8 inch are adequate.
5. Find the average depth of water collected in the containers (add up the depths and then divide by the number of containers).

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6. To determine the irrigation rate in inches per hour, multiply the average depth of water times four.

Now that you know your sprinkler system irrigation rate, you can more efficiently apply water to your turf. Use Table 1 as a guide for sprinkler times. For example, if the sprinkler system applies water at the rate of 2 inches per hour and you wish to apply 3/4 inches of water, then you would need to run your sprinklers for about 23 minutes.

To calculate the time of irrigating for rates not listed in Table 1, use equation 1.

Calibration Pointers

- Try to calibrate the sprinkler system during the same time it is normally run, so that water pressures are similar.
- Low water pressure can significantly reduce the amount and coverage of water applied by a sprinkler system.
- Application rates normally should not exceed 3/4 - 1 inch of water per irrigation.
- Most irrigation controllers can be adjusted for accurate time settings. Consult your operating instructions or local sprinkler company for details.
- If you use a hose-end sprinkler, a mechanical timer and shut-off switch that attaches to the faucet will help make watering more efficient.
- Avoid mixing sprinkler head types. Mist heads apply more water than impact heads. Match sprinkler heads for uniform coverage.
- Check the sprinkler system frequently. Replace broken sprinkler heads, clear clogged nozzles, and adjust the direction of spray as needed.
- Use water efficiently; do not waste it.
- For more specific information on turf irrigation, see factsheet ENH 9, "Watering Your Florida Lawn."

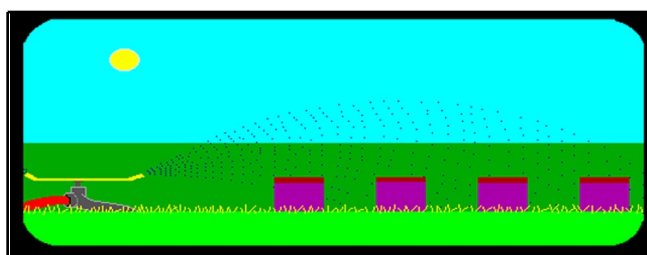


Figure 2. Hose-End Sprinkler

$$\text{Minutes required to run each zone} = \frac{\text{Amount of water to be applied} \times 60}{\text{Your calibrated irrigation rate}}$$

Equation 1. Use this equation to calculate the time required to apply water for rates not listed in Table 1.

Table 1. Time required to apply water for a given irrigation rate.

| | Irrigation Rate (Amount of water applied per hour) | | | |
|----------------------|--|----|--------|----|
| | 1/2" | 1" | 1 1/2" | 2" |
| Total water to apply | Minutes to run each zone | | | |
| 1/2" | 60 | 30 | 20 | 15 |
| 3/4" | 90 | 45 | 30 | 23 |
| 1" | 120 | 60 | 40 | 30 |